Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (One Time Amended) A radiation wave intensity modulator, comprising:

a first element for producing a wave component from a radiation wave, said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations;

an optical transport for receiving said wave component, said transport having a waveguiding region and one or more guiding regions coupled to said waveguiding region;

a transport influencer, operatively coupled to said optical transport and having at least a portion integrated with one or more guiding regions of said one or more guiding regions, for affecting said polarization property of said wave component responsive to a control signal; and

a second element for interacting with said affected wave component wherein an intensity of said wave component is varied responsive to said control signal.

2. (Original) The modulator of claim 1 wherein said first element and said second element are polarization filters.

3. (Original) The modulator of claim 1 wherein said elements are integrated into said transport.

4. (Original) The modulator of claim 1 wherein said influencer produces a controllable magnetic field parallel to a propagation direction of said wave through said transport to alter said polarization property.

5. (Original) The modulator of claim 1 wherein said influencer alters said polarization property by changing a rotation angle of said wave component in a range from about zero degrees to about ninety degrees.

6. (One Time Amended) The modulator of claim 1 wherein said transport is a fiber waveguide including a core and a cladding corresponding to one or more guiding regions

of said one or more guiding regions and wherein said influencer includes a magnetic material ~~proximate~~ integrated with said cladding.

7. (Original) The modulator of claim 6 wherein said magnetic material includes permanent magnetic material.

8. (Original) The modulator of claim 6 wherein said magnetic material is selectively magnetized responsive to an electric current.

9. (Original) The modulator of claim 6 wherein said magnetic material is integrated into said fiber waveguide.

10. (Original) The modulator of claim 5 wherein said elements are circular polarization filters having a crossed transmission orientation.

11. (Original) The modulator of claim 5 wherein said elements are circular polarization filters having an aligned transmission orientation.

12. (Original) The modulator of claim 1 wherein said wave component may be extinguished.

13. (Original) The modulator of claim 1 wherein said set of orthogonal polarization includes right hand circular polarization and left hand circular polarization.

14. (One Time Amended) A radiation wave intensity modulating method, the method comprising:

producing a wave component from a radiation wave, said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations;

receiving said wave component by a transport having a waveguiding region and one or more guiding regions coupled to said waveguiding region;

affecting said polarization property of said wave component responsive to a control signal using an influencer having at least a portion integrated with one or more guiding regions of said one or more guiding regions; and

interacting with said affected wave component wherein an intensity of said wave component is varied responsive to said control signal.

15. (Original) The method of claim 14 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said first element and said second element are polarization filters.

16. (Original) The method of claim 14 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are integrated into said transport.

17. (One Time Amended) The method of claim 14 ~~wherein said affecting step includes use of a property influencer and~~ wherein said influencer produces a controllable magnetic field parallel to a propagation direction of said wave through said transport to alter said polarization property.

18. (One Time Amended) The method of claim 14 ~~wherein said affecting step includes use of a property influencer and~~ wherein said influencer alters said polarization property by changing a rotation angle of said wave component in a range from about zero degrees to about ninety degrees.

19. (One Time Amended) The method of claim 14 ~~wherein said receiving step includes receiving said wave component using an optical transport and~~ wherein said transport is a fiber waveguide including a core and a cladding corresponding to one or more guiding regions of said one or more guiding regions and wherein said influencer includes a magnetic material ~~proximate~~ integrated with said cladding.

20. (Original) The method of claim 19 wherein said magnetic material includes permanent magnetic material.

21. (Original) The method of claim 19 wherein said magnetic material is selectively magnetized responsive to an electric current.

22. (Original) The method of claim 19 wherein said magnetic material is integrated into said fiber waveguide.

23. (Original) The method of claim 18 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are circular polarization filters having a crossed transmission orientation.

24. (Original) The method of claim 18 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are circular polarization filters having an aligned transmission orientation.

25. (Original) The method of claim 14 wherein said wave component may be extinguished.

26. (Original) The method of claim 14 wherein said set of orthogonal polarization includes right hand circular polarization and left hand circular polarization.

27. (One Time Amended) A radiation wave intensity modulating apparatus, comprising:

means for producing a wave component from a radiation wave, said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations;

means for receiving said wave component by a transport having a waveguiding region and one or more guiding regions coupled to said waveguiding region;

means for affecting said polarization property of said wave component responsive to a control signal using an influencer having at least a portion integrated with one or more guiding regions of said one or more guiding regions; and

means for interacting with said affected wave component wherein an intensity of said wave component is varied responsive to said control signal.

28. (Original) The apparatus of claim 27 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said first element and said second element are polarization filters.

29. (Original) The apparatus of claim 27 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are integrated into said transport.

30. (One Time Amended) The apparatus of claim 27 ~~wherein said affecting step includes use of a property influencer and~~ wherein said influencer produces a controllable magnetic field parallel to a propagation direction of said wave through said transport to alter said polarization property.

31. (One Time Amended) The apparatus of claim 27 ~~wherein said affecting step includes use of a property influencer and~~ wherein said influencer alters said polarization property by changing a rotation angle of said wave component in a range from about zero degrees to about ninety degrees.

32. (One Time Amended) The apparatus of claim 27 ~~wherein said receiving step includes receiving said wave component using an optical transport and~~ wherein said transport is a fiber waveguide including a core and a cladding corresponding to one or more guiding regions of said one or more guiding regions and wherein said influencer includes a magnetic material proximate said cladding.

33. (Original) The apparatus of claim 32 wherein said magnetic material includes permanent magnetic material.

34. (Original) The apparatus of claim 32 wherein said magnetic material is selectively magnetized responsive to an electric current.

35. (Original) The apparatus of claim 32 wherein said magnetic material is integrated into said fiber waveguide.

36. (Original) The apparatus of claim 31 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are circular polarization filters having a crossed transmission orientation.

37. (Original) The apparatus of claim 31 wherein said producing step includes use of a first element, wherein said interacting step includes use of a second element, and wherein said elements are circular polarization filters having an aligned transmission orientation.

38. (Original) The apparatus of claim 27 wherein said wave component may be extinguished.

39. (Original) The apparatus of claim 27 wherein said set of orthogonal polarization includes right hand circular polarization and left hand circular polarization.

40. (New) A radiation wave intensity modulator, comprising:

a first polarizer for producing a wave component from a radiation source, said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations;

a fiber waveguide for receiving said wave component, said waveguide having a core and one or more guiding regions disposed around said core;

a variable magnetic field generating structure, at least of portion of which is integrated with and operatively coupled to one or more of said one or more guiding regions, for affecting said polarization property of said wave component in said core responsive to a control signal; and

a second polarizer for interacting with said affected wave component wherein an intensity of said wave component is varied responsive to said control signal.